

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW MEXICO**

**CITIZENS FOR ALTERNATIVES
TO RADIOACTIVE DUMPING, et al.,**

Plaintiffs,

vs.

No. **CIV 99-321 MCA/ACT**

SPENCER ABRAHAM,
United States Secretary of Energy, et al.,

Defendants.

MEMORANDUM OPINION AND ORDER

THIS MATTER comes before the Court on Plaintiffs' *Motion and Brief in Support of Judgement for Plaintiffs on NEPA Claims in the Second Amended Complaint* [Doc. No. 125, as amended by Doc. No. 172], and the *Federal Defendants' Motion to Dismiss Due to Plaintiffs' Failure to Demonstrate the Requirements for Injunctive Relief* [Doc. No. 196]. Having considered the relevant law, the parties' submissions, the Administrative Record (as cited and provided by the parties), and otherwise being fully advised in the premises, the Court denies the relief requested in Plaintiffs' motion and grants the relief requested in the motion filed by Defendants United States Secretary of Energy and United States Department of Energy (hereinafter "Federal Defendants").

In accordance with these rulings, the Court dismisses the Federal Defendants from this action and affirms the *Record of Decision for the Department of Energy's Waste Isolation*

Pilot Plant, 63 Fed. Reg. 3,624 (Jan. 23, 1998), documenting the Federal Defendants' decision to implement the Preferred Alternative, as analyzed in the "Waste Isolation Pilot Plant Disposal Phase Final Supplemental Environmental Impact Statement" (SEIS-II) dated September 1997. The Preferred Alternative is to use the Waste Isolation Pilot Plant (WIPP) in southeastern New Mexico for disposal of up to 175,600 cubic meters (6.2 million cubic feet) of the "basic inventory" of transuranic (TRU) waste generated by defense activities that has been placed in retrievable storage since 1970, and defense TRU waste that would continue to be generated over an additional 35-year period.

The Court's affirmance of this *Record of Decision* and the SEIS-II is based solely on the conclusion that the Federal Defendants' complied with the procedure required by the National Environmental Policy Act (NEPA) with respect to the issues timely raised and briefed by Plaintiffs in this action. This *Memorandum Opinion and Order* is limited to the *Record of Decision* and SEIS-II noted above and does not purport to review any other actions by the Federal Defendants, or other federal agencies, relating to WIPP or to the disposal of any type of radioactive waste other than the basic inventory of TRU waste identified above. Further, because judicial review of Plaintiffs' NEPA claim is limited by the "arbitrary and capricious" standard set forth in Section 706 of the Administrative Procedure Act (APA), this *Memorandum Opinion and Order* does not constitute an independent factual determination by the Court that WIPP is the best alternative for the disposal of any type or quantity of radioactive waste.

I. BACKGROUND

The Waste Isolation Pilot Plant (WIPP) is a disposal system for transuranic radioactive waste¹ (TRU waste) located near Carlsbad in southeastern New Mexico. The WIPP disposal system involves the burial of TRU waste 2,150 feet underground in an ancient layer of salt which, according to the Federal Defendants' predictions, will eventually encapsulate the waste containers through a process known as "salt creep." [SEIS-II, at S-7 to S-8.] By statute, the waste which may be placed in the WIPP disposal site is limited to TRU waste generated by defense activities associated with nuclear weapons; no high level waste or spent nuclear fuel from commercial power plants may be disposed of at the WIPP under this statute. See Waste Isolation Pilot Plant Land Withdrawal Act (LWA), Pub. L. No. 102-529, 106 Stat. 4777 (1992), as amended by Pub. L. No. 104-201, 110 Stat. 2422 (1996)).

The Federal Defendants have prepared three environmental impact statements specifically relating to the WIPP disposal system. The first of these environmental impact statements (the FEIS) was issued in 1980 and analyzed the initial proposal to design, construct, and operate WIPP. See *Waste Isolation Pilot Plant Final Environmental Impact Statement*, 45 Fed. Reg. 70,539 (Oct. 24, 1980). The Federal Defendants' issued a second environmental impact statement in 1990 (the SEIS-I) to further analyze the phased development of WIPP. See *Record of Decision; Waste Isolation Pilot Plant*, 55 Fed. Reg.

¹The SEIS-II defines "transuranic waste" as: "Waste materials (excluding high-level waste and certain other waste types) contaminated with alpha-emitting radionuclides that are heavier than uranium with half-lives greater than 20 years and occur in concentrations greater than 100 nanocuries per gram. Transuranic waste results primarily from plutonium reprocessing and fabrication as well as research activities at U.S. Department of Energy defense installations." [SEIS-II, at GL-17.]

25,689 (Jun. 22, 1990). A third environmental impact statement (the SEIS-II) was completed in September 1997. See Record of Decision for the Department of Energy's Waste Isolation Pilot Plant, 63 Fed. Reg. 3,624 (Jan. 23, 1998). The SEIS-II covers the disposal phase of WIPP and addresses new issues that arose since the completion of the FEIS and the SEIS-I.

Other federal and state agencies have been involved in environmental analysis or regulatory oversight relating to WIPP. See, e.g., Criteria for the Certification and Recertification of the Waste Isolation Pilot Plant's Compliance with the Disposal Regulations: Certification Decision, 63 Fed. Reg. 27,354, 27, 355 (May 18, 1998) (action by the EPA Administrator); Record of Decision; Waste Isolation Pilot Program, 55 Fed. Reg. 38,586 (Sept. 19, 1990) (action by the Department of the Interior). In particular, the SEIS-II makes reference to the *Compliance Certification Application* (CCA) that the Federal Defendants submitted to the Administrator of the Environmental Protection Agency (EPA) pursuant to Section 8 of the LWA, and which the EPA Administrator was reviewing at the time the SEIS-II was issued. [SEIS-II, at I-9 to I-10.]

WIPP has been the subject of litigation in both federal and state courts on several occasions since it was proposed in 1980. See, e.g., State of N.M. v. EPA, 114 F.3d 290 (D.C. Cir. 1997) (involving a challenge the EPA Administrator's *Criteria for the Certification and Recertification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR Part 191 Disposal Regulations*, 61 Fed. Reg. 5,224 (Feb. 9, 1996)); State of N.M. v. Watkins, 969 F.2d 1122 (D.C. Cir. 1992) (involving a challenge to *Public Land Order 6232*, which provided for the deposit of TRU waste at the WIPP site for test purposes); New

Mexico ex rel. Madrid v. Richardson, 39 F. Supp. 2d 48 (D.D.C. 1999) (construing the scope of an injunction issued in 1992 and the effect of an amendment to the New Mexico Hazardous Waste Act); Southwest Research and Info. Ctr. v. State of N.M., 2003-NMCA-012, 133 N.M. 179, 62 P.3d 270 (involving a challenge to a state permit modification), cert. granted, 132 N.M. 551, 52 P.3d 411.

The action presently before this Court originated in the First Judicial District Court of the State of New Mexico as a public nuisance claim under the laws of the State of New Mexico. Based on that state-law claim, Plaintiffs sought a temporary restraining order prohibiting the Federal Defendants and their contractors from commencing the shipment of TRU waste to the WIPP site.

On March 24, 1999, the Federal Defendants removed the action to the United States District Court for the District of New Mexico pursuant to 28 U.S.C. § 1442(a)(1). [Doc. No. 1.] The Honorable Martha Vazquez denied Plaintiff's request for a temporary restraining order and subsequently dismissed Plaintiffs' public-nuisance claim. [Doc. No. 2.]

On July 23, 1999, Judge Vazquez granted Plaintiffs leave to amend their complaint to add a claim under the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321-4370f, and its implementing regulations, 40 C.F.R. pts. 1500-1508. [Doc. No. 16.] Plaintiffs' NEPA claim is the subject of this *Memorandum Opinion and Order*.

The case was reassigned to the Honorable John E. Conway on August 25, 1999. [Doc. No. 25.] Judge Conway made a number of preliminary rulings on several issues. In accordance with these rulings, Plaintiffs' demand for a jury trial on their claims against the

Federal Defendants was stricken. [Doc. No.65.] Plaintiffs' public nuisance claim against the Federal Defendants was dismissed based on sovereign immunity, and Plaintiffs' NEPA claim was limited to the SEIS-II issued in September 1997, except to the extent Plaintiffs could show that information relevant to prior environmental impact statements was fraudulently concealed until 1998. [Doc. No. 66.] Plaintiffs' public nuisance claim against Defendant Westinghouse Electric Company was dismissed, subject to reconsideration at a later date. [Doc. No. 68, 108, 165.]

Plaintiffs also sought and received permission to make further amendments to their complaint and extend various pretrial deadlines. [Doc. No. 17, 20, 71, 73, 108, 109, 165.] Plaintiffs *Final Complaint* was not filed until August 31, 2001. [Doc. No. 168.]

On November 20, 2000, Plaintiffs moved for judgment in their favor on the NEPA claim asserted in their *Second Amended Complaint*. [Doc. No. 125.] Briefing on Plaintiffs' motion was not completed until October 25, 2001, due to the subsequent amendment of the complaint and other procedural delays. [Doc. No. 151, 168, 172, 173.]

On December 13, 2001, while the Defendants were still in the process of answering Plaintiffs' *Final Complaint*, the case was reassigned from Judge Conway to me. I initially deferred ruling on Plaintiffs' NEPA claim because of the pendency of Plaintiffs' public nuisance claim against the private Defendants, which was still the subject of a jury demand. See generally Ag Servs. of Am., Inc. v. Nielsen, 231 F.3d 726, 730 (10th Cir. 2000) (stating the general rule that when a case involves both a jury trial and a bench trial, any essential factual issues which are central to both must be first tried to a jury). At a status conference

on May 12, 2003, however, the parties agreed that the Court could issue a dispositive ruling on Plaintiffs' NEPA claim without waiting for the outcome of Plaintiffs' public nuisance claim against the remaining private Defendants. [Doc. No. 193, Ex. 1 to Doc. No. 210.]

On June 3, 2003, the Federal Defendants filed a motion to dismiss Plaintiffs' NEPA claim on the grounds that Plaintiffs failed to demonstrate that they have met the requirements for injunctive relief. [Doc. No. 196.] Briefing on that motion was completed on July 28, 2003. [Doc. No. 209, 210, 212, 213.]

The public-nuisance claim against the private Defendants remains the subject of pending motions filed or briefed after that date. [Doc. No. 194, 228, 262, 265, 267.] Plaintiffs' public-nuisance claim is not addressed in this *Memorandum Opinion and Order*.

II. ANALYSIS

I first address the Federal Defendants' contention that Plaintiffs' NEPA claim is barred by certain jurisdictional defenses or preclusion doctrines. After concluding that this claim is not precluded or jurisdictionally barred as to the Federal Defendants, I analyze the merits of Plaintiffs' allegations that the Federal Defendants are in violation of NEPA. Finally, I address whether Plaintiffs are entitled to any injunctive relief against the Federal Defendants. Because I conclude that Plaintiffs do not prevail on the merits of the NEPA claim asserted in this action, it follows that they are not entitled to injunctive relief against the Federal Defendants, and the Federal Defendants must be dismissed from this action.

A. Jurisdictional Issues

The Federal Defendants assert that judicial review of Plaintiffs' NEPA claim, or

portions thereof, is barred by certain jurisdictional defenses or preclusion doctrines. In particular, the Federal Defendants assert that Plaintiffs lack the standing required to establish a “case or controversy” under Article III of the United States Constitution. The Federal Defendants further contend that many of Plaintiffs’ allegations in this case consist of claims that were previously adjudicated in another case challenging WIPP’s certification by the EPA Administrator. According to the Federal Defendants, Plaintiffs are precluded from relitigating these claims under the doctrine of *res judicata* and under the terms of a statute which provides for judicial review of the EPA Administrator’s actions concerning WIPP in the United States Courts of Appeals for the Tenth Circuit or the District of Columbia.

1. Standing

The Federal Defendants’ contend that Plaintiffs lack standing to assert a claim under NEPA. “The question of standing ‘involves both constitutional limitations on federal-court jurisdiction and prudential limitations on its exercise.’” Bennett v. Spear, 520 U.S. 154, 162 (1997) (quoting Warth v. Seldin, 422 U.S. 490, 498 (1975)).

To overcome the limitations on standing imposed by Article III of the United States Constitution, Plaintiffs must satisfy three requirements. See McConnell v. Fed. Election Comm’n, 124 S. Ct. 619, 707 (2003); Colo. Envtl. Coalition v. Wenker, 353 F.3d 1221, 1234 (10th Cir. 2004) (per curiam). First, Plaintiffs must demonstrate an “injury in fact,” which is “concrete,” “distinct and palpable,” and “actual or imminent.” Whitmore v. Arkansas, 495 U.S. 149, 155 (1990) (citation and internal quotation marks omitted). Second, Plaintiffs must establish “a causal connection between the injury and the conduct complained of--the injury

has to be ‘fairly trace[able] to the challenged action of the defendant, and not ... th[e] result [of] some third party not before the court.’” Lujan v. Defenders of Wildlife, 504 U.S. 555, 560-561 (1992) (quoting Simon v. Eastern Ky. Welfare Rights Organization, 426 U.S. 26, 41-42 (1976)). Third, Plaintiffs must show a “‘substantial likelihood’ that the requested relief will remedy the alleged injury in fact.” Vermont Agency of Natural Resources v. United States ex rel. Stevens, 529 U.S. 765, 771 (2000) (quoting Simon, 426 U.S. at 45).

Additional requirements must be satisfied when an organization seeks to assert claims on behalf of its members. “An association has standing to bring suit on behalf of its members when its members would otherwise have standing to sue in their own right, the interests at stake are germane to the organization's purpose, and neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit.” Friends of Earth, Inc. v. Laidlaw Environmental Services (TOC), Inc., 528 U.S. 167, 180-181 (2000). The Federal Defendants do not contend that the organizational Plaintiff in this case, Citizens for Alternatives to Radioactive Dumping (CARD), lacks relevance to the interests at stake or that participation of CARD’s individual members is required. Thus, Plaintiff CARD’s standing depends on its members’ standing to sue in their own right.

Applying the constitutional requirements for standing in the context of a NEPA claim, the Tenth Circuit has stated that:

An agency's failure to follow the National Environmental Policy Act's prescribed procedures creates a risk that serious environmental consequences of the agency action will not be brought to the agency decisionmaker's attention. The injury of an increased risk of harm due to an agency's uninformed decision is precisely the type of injury the National Environmental

Policy Act was designed to prevent. Thus, under the National Environmental Policy Act, an injury of alleged increased environmental risks due to an agency's uninformed decisionmaking may be the foundation for injury in fact under Article III.

Comm. to Save the Rio Hondo v. Lucero, 102 F.3d 445, 448-49 (10th Cir. 1996); accord Sierra Club v. United States Dept. of Energy, 287 F.3d 1256, 1264 (10th Cir. 2002).

The “injury in fact” required for purposes of Article III standing, however, “is not injury to the environment but injury to the plaintiff.” Friends of Earth, Inc., 528 U.S. at 181. “Therefore, to establish injury in fact for purposes of Article III, a plaintiff must not only show that the agency's disregard of a procedural requirement results in an increased risk of environmental harm, but a plaintiff must also show the increased risk is to the litigant's concrete and particularized interests.” Comm. to Save the Rio Hondo, 102 F.3d at 449. “To demonstrate that the increased risk of harm injures the plaintiff's concrete interests, the litigant must establish either its ‘geographical nexus’ to, or actual use of the site where the agency will take or has taken action such that it may be expected to suffer the environmental consequences of the action.” Id. (quoting Douglas County v. Babbitt, 48 F.3d 1495, 1501 (9th Cir. 1995)).

In this case, some of the individual Plaintiffs and members of CARD have submitted affidavits which adequately document “injury in fact” based upon their concerns about their proximity to radioactive waste destined for, or placed within, the WIPP site, and the increased risk of exposure to that waste resulting from uninformed decisionmaking by the Federal Defendants. See Friends of the Earth, Inc., 528 U.S. at 181; Committee to Save the

Rio Hondo, 102 F.3d at 450. In particular, the affiants state that they live in close proximity to the designated routes for transporting TRU waste to the WIPP site, or use water from the Pecos River downstream from the WIPP site. Thus, in the course of their daily activities, the affiants and their property are exposed to the risk of a release of harmful radiation or other hazardous materials occurring during transportation of TRU waste to the WIPP site, or after the waste is deposited in the WIPP site in the event that underground sources of water migrated through the site and reached the Pecos River. [Doc. No. 173, at Ex. 8 through 22.]

The Federal Defendants assert that the risk of such a release is very unlikely. For the purpose of satisfying the minimum constitutional requirements necessary to establish standing to bring a NEPA claim, however, Plaintiffs need not show that an actual release of TRU waste in their area is certain to occur from the Federal Defendants' activities. Rather, in asserting that they have standing to bring a NEPA claim, Plaintiffs need only show that the risk of actual, threatened, or imminent harm to their concrete interests is increased by the uninformed decisionmaking associated with the failure to prepare another supplemental environmental impact statement. See Sierra Club, 287 F.3d at 1265. In other words, the increased risk must be "fairly traceable to the agency's [alleged] failure to comply with the National Environmental Policy Act." Comm. to Save the Rio Hondo, 102 F.3d at 451. Plaintiffs have satisfied this minimum threshold requirement in this case.

Further, it is not disputed that the Federal Defendants' transportation and disposal activities relating to the WIPP site are ongoing. This is not a case where injunctive relief is precluded because the alleged injury is limited to past violations. "It can scarcely be doubted

that, for a plaintiff who is injured or faces the threat of future injury due to illegal conduct ongoing at the time of suit, a sanction that effectively abates that conduct and prevents its recurrence provides a form of redress.” Friends of the Earth, Inc., 528 U.S. at 185-86; see Steel Co. v. Citizens for a Better Environment, 523 U.S. 83, 108 (1998) (“If respondent had alleged a continuing violation or the imminence of a future violation, the injunctive relief requested would remedy that alleged harm.”).

In this regard, actions to force the preparation of a supplemental environmental impact statement are among the types of disputes that are “traditionally thought to be capable of resolution through the judicial process.” Raines v. Byrd, 521 U.S. 811, 819 (1997) (quoting Flast v. Cohen, 392 U.S. 83, 97 (1968)). The injury to Plaintiffs’ interests caused by the allegedly uninformed decisionmaking of the Federal Defendants would be redressed by a favorable decision requiring the Federal Defendants to conduct additional analysis under NEPA. In order to establish standing, Plaintiffs need not show that the Federal Defendants’ ultimate decision to proceed with disposal of TRU waste would change upon the completion of such additional analysis. See Comm. to Save the Rio Hondo, 102 F.3d at 452 (citing Defenders of Wildlife, 504 U.S. at 572 n.7). For these reasons, “the alleged injury is redressable by judicial intervention.” Sierra Club, 287 F.3d at 1265.

In addition to the minimum constitutional requirements of injury-in-fact, causation, and redressability, federal courts have imposed a set of prudential limitations on the exercise of their jurisdiction that bear on the question of standing. See Bennett, 520 U.S. at 162. Among these prudential limitations is the requirement “that a plaintiff’s grievance must

arguably fall within the zone of interests protected or regulated by the statutory provision or constitutional guarantee invoked in the suit.” Id. (citations omitted). In the context of judicial review under the Administrative Procedure Act (APA), the Supreme Court has explained this requirement as follows:

The “zone of interest” test is a guide for deciding whether, in view of Congress' evident intent to make agency action presumptively reviewable, a particular plaintiff should be heard to complain of a particular agency decision. In cases where the plaintiff is not itself the subject of the contested regulatory action, the test denies a right of review if the plaintiff's interests are so marginally related to or inconsistent with the purposes implicit in the statute that it cannot reasonably be assumed that Congress intended to permit the suit. The test is not meant to be especially demanding; in particular, there need be no indication of congressional purpose to benefit the would-be plaintiff.

Clark v. Securities Indus. Ass'n, 479 U.S. 388, 399-400 (1987) (footnote omitted); cf. Lujan v. Nat'l Wildlife Fed'n, 497 U.S. 871 (1990) (explaining relationship between statutory requirements for judicial review under the APA and the “zone of interests” test); Wenker, 353 F.3d at 1235 (similar).

In this case, Plaintiffs’ “alleged injuries fall within the ‘zone of interests’ that the National Environmental Policy Act was designed to protect.” Comm. to Save the Rio Hondo, 102 F.3d at 448; cf. Lujan, 497 U.S. at 886 (concluding that “recreational use and aesthetic enjoyment” are within the zone of interests that NEPA was specifically designed to protect). Thus, the prudential component of standing is also satisfied. Both the individual Plaintiffs and Plaintiff CARD (on behalf of its members) have standing to pursue the NEPA claim alleged in the *Final Complaint*. [Doc. No. 168.]

2. Effect of the LWA and Prior Litigation

This Court next addresses the Federal Defendants' contention that Plaintiffs' NEPA claim is precluded to the extent that it overlaps with any challenge that was, or could have been brought, with respect to the EPA's certification of disposal activities at the WIPP site pursuant to the Waste Isolation Pilot Plant Land Withdrawal Act (LWA), Pub. L. No. 102-529, 106 Stat. 4777 (1992), as amended by Pub. L. No. 104-201, 110 Stat. 2422 (1996). Section 8 of the LWA, as amended, requires the EPA Administrator to take numerous actions to ensure regulatory oversight of the disposal of TRU waste at the WIPP site, including issuance of final disposal regulations and certification criteria, as well as certification and periodic recertification of compliance with those disposal regulations. Section 18 of the LWA further provides that: "A civil action for judicial review of any final action of the [EPA] Administrator under this Act may be brought only in the United States Court of Appeals for the Tenth Circuit or for the District of Columbia, and shall be brought not later than the 60th day after the date of such final action."

On May 18, 1998, the EPA Administrator issued a certification pursuant Section 8(d)(2) of the LWA, as amended. See Criteria for the Certification and Recertification of the Waste Isolation Pilot Plant's Compliance with the Disposal Regulations: Certification Decision, 63 Fed. Reg. 27,354 (May 18, 1998). Plaintiffs filed a civil action seeking judicial review of the EPA's certification decision in the D.C. Circuit. That action resulted in an unpublished judgment denying the relief requested by Plaintiffs "[f]or substantially the reasons stated in the agency's decision and in its brief on appeal." Southwest Research and

Info. Ctr. v. EPA, Nos. 98-1323 & 98-1324 (consolidated) (D.C. Cir. June 28, 1999).

In Bowen v. Mass., 487 U.S. 879, 903 (1988), the Supreme Court concluded that: “When Congress enacted the APA to provide a general authorization for review of agency action in the district courts, it did not intend that general grant of jurisdiction to duplicate the previously established special statutory procedures relating to specific agencies.” Thus, Plaintiffs may not use the APA to circumvent the specific language in Section 18 of the LWA that provides another forum for judicial review of the EPA Administrator’s actions regarding WIPP disposal activities.

It follows that none of the EPA actions mandated under Section 8 of the LWA are subject to judicial review by this Court in this action. The fact that Plaintiffs already obtained judicial review of the EPA certification in the D.C. Circuit lends further support to this conclusion.

It does not follow, however, that the Federal Defendants are exempt from compliance with NEPA by virtue of the EPA certification issued pursuant to Section 8(d)(2) of the LWA, as amended. Section 9(a)(1)(G) of the LWA provides, in relevant part, that: “Beginning on the date of the enactment of this Act, the Secretary shall comply with respect to WIPP, with . . . all other applicable Federal laws pertaining to public health and environmental safety or the environment” Section 14(b) of the LWA further provides, in relevant part, that: “No provision of this Act may be construed to limit, or in any manner affect, . . . the Secretary’s obligation to comply with . . . any other applicable clean air or hazardous waste law.”

The Court construes NEPA as one of the applicable Federal laws pertaining to public health and safety, clean air, hazardous waste, or the environment that is referenced in the LWA. This construction is in accordance with the principles of statutory interpretation articulated by the Tenth Circuit in Catron County Bd. of Comm'rs v. United States Fish and Wildlife Serv., 75 F.3d 1429 (10th Cir. 1996). In that case, the Tenth Circuit concluded that a federal agency's designation of critical habitat for a threatened species of owl under the Endangered Species Act (ESA) was still subject to the requirements of NEPA notwithstanding the fact that the procedures required under both of these environmental protection statutes "parallel and perhaps overlap" one another to some extent. Id. at 1437.

Such a partial overlap between the requirements of the two statutes at issue in this case does not exempt the Federal Defendants from their obligations under NEPA because "[t]he plain language of NEPA makes clear that 'to the fullest extent possible' federal agencies must comply with the act and prepare an impact statement for all major federal actions significantly affecting the environment." Id. (quoting 42 U.S.C. § 4332(C)); cf. Bowen, 487 U.S. at 903 (concluding that the APA "should not be construed to defeat the central purpose of providing a broad spectrum of judicial review of agency action"). Although the EPA oversight mandated by Section 8 of the LWA "may be an environmentally beneficial goal," such oversight "is not inevitably beneficial or immune to improvement by compliance with NEPA procedure." Catron County Bd. of Comm'rs., 75 F.3d at 1437.

For these reasons, I conclude that the Federal Defendants cannot avoid judicial review of Plaintiffs' NEPA claim in this case by relying on the fact that information generated or

documented in the EPA certification process was also used or referenced in the preparation of the SEIS-II for WIPP's disposal phase. It must be emphasized, however, that this Court's review of such information is for the sole purpose of determining the Federal Defendants' compliance with NEPA, and not for the purpose of reviewing the actions of the EPA Administrator pursuant to Section 8 of the LWA. In addition, my conclusion that Plaintiffs have standing and are not jurisdictionally barred from pursuing their NEPA claim does not necessarily mean that they will ultimately prevail on the merits of that claim.

B. Standard of Review and Statutory Framework

The essence of Plaintiffs' NEPA claim is that the Federal Defendants have not fulfilled their obligations under NEPA and must cease operations at the WIPP site pending completion of another supplemental environmental impact statement that adequately addresses the issues set forth in the *Final Complaint* and in Plaintiffs' briefs. The Federal Defendants deny these contentions and assert that the issues raised by Plaintiffs in this action are adequately addressed in the SEIS-II and/or prior environmental impact statements issued pursuant to NEPA.

The Supreme Court has interpreted NEPA and its implementing regulations to mean that a supplemental environmental impact statement must be prepared "[i]f there remains 'major federal actio[n]' to occur," and if there exists new information that is "sufficient to show that the remaining action will 'affec[t] the quality of the human environment' in a significant manner or to a significant extent not already considered." Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 374 (1989); accord Norton v. Southern Utah

Wilderness Alliance, 124 S. Ct. 2373, 2384 (2004). In particular, NEPA's implementing regulations require federal agencies to supplement an environmental impact statement "if '[t]he agency makes substantial changes in the proposed action that are relevant to environmental concerns,' or '[t]here are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.'" Friends of the Bow v. Thompson, 124 F.3d 1210, 1218 (10th Cir. 1997) (quoting 40 C.F.R. §§ 1502.9(c)(1)(i), (ii) (1996)); accord Norton, 124 S. Ct. at 2384. The agency must "take a 'hard look' at the new information to assess whether supplementation is necessary." Norton, 124 S. Ct. at 2384.

On the other hand, "an agency need not supplement an EIS every time new information comes to light after the EIS is finalized. To require otherwise would render agency decisionmaking intractable, always awaiting updated information only to find the new information outdated by the time a decision is made." Marsh, 490 U.S. at 373; accord Friends of the Bow, 124 F.3d at 1218. Further, once an agency action is completed, "[t]here is no ongoing 'major Federal action' that could require supplementation" of an EIS. Norton, 124 S. Ct. at 2385.

Even when supplementation of an EIS is required, "it is well established that NEPA 'does not mandate particular results,' nor does it require agencies 'to elevate environmental concerns over other valid concerns.'" Lee v. United States Air Force, 354 F.3d 1229, 1237 (10th Cir. 2004) (quoting Utahns for Better Transp. v. U.S. Dep't of Transp., 305 F.3d 1152, 1162-63 (10th Cir.2002)) (citations omitted). "Because NEPA imposes procedural rather

than substantive requirements, “[t]he role of the courts in reviewing compliance with NEPA is simply to ensure that the agency has adequately considered and disclosed the environmental impact of its actions and that its decision is not arbitrary and capricious.” Id. (quoting Utahns for Better Transp., 305 F.3d at 1163).

An agency’s determination that an existing environmental impact statement need not be supplemented before proceeding with a major federal action also is reviewed under the “arbitrary and capricious” standard, which is set forth in Section 706(2)(A) of the APA. 5 U.S.C. § 706(2)(A); see Marsh, 490 U.S. at 376; Friends of the Bow, 124 F.3d at 1218. Under that standard, “the reviewing court ‘must consider whether the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment.’” Marsh, 490 U.S. at 378 (quoting Citizens to Preserve Overton Park, Inc. v. Volpe, 401 U.S. 402, 416 (1971)). An agency acts arbitrarily and capriciously if it “entirely fails to consider an important aspect of the problem” or “offers an explanation for its decision that runs counter to the evidence before it or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.” Motor Vehicle Mfrs. Ass’n v State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983).

Review of agency action under this standard requires a “searching and careful” inquiry. Volpe, 401 U.S. at 416. In particular, “courts should not automatically defer to the agency’s express reliance on an interest in finality without carefully reviewing the record and satisfying themselves that the agency has made a reasoned decision based on its evaluation of the significance--or lack of significance --of the new information.” Marsh, 490 U.S. at

378.

Deference to an agency's expertise is required, however, when resolution of the dispute "involves primarily issues of fact," such as whether the conclusions stated in an existing environmental impact statement are inaccurate or incomplete in light of new information. Marsh, 490 U.S. at 376-77. "When specialists express conflicting views, an agency must have discretion to rely on the reasonable opinions of its own qualified experts even if, as an original matter, a court might find contrary views more persuasive." Id. at 378; accord Friends of the Bow, 124 F.3d at 1218; Holy Cross Wilderness Fund v. Madigan, 960 F.2d 1515, 1523-24 (10th Cir. 1992). Such deference to agency expertise in resolving factual disputes accords with the Supreme Court's recent pronouncement that Section 706 of the APA is designed "to protect agencies from judicial interference with their lawful discretion, and to avoid judicial entanglement in abstract policy disagreements which courts lack both the expertise and information to resolve." Norton, 124 S. Ct. at 2381.

The APA requires courts to "review the whole record or those parts of it cited by a party." 5 U.S.C. § 706. The Tenth Circuit has further specified that the Federal Rules of Appellate Procedure set forth the appropriate procedural framework for conducting such review. See Olenhouse v. Commodity Credit Corp., 42 F.3d 1560, 1579-80 (10th Cir. 1994). These rules require that Plaintiffs' opening brief must contain their "contentions and the reasons for them, with citations to the authorities and parts of the record on which [they] rely." Fed. R. App. P. 28(a)(9)(A).

Mere cursory references in the Plaintiffs' *Complaint* are not sufficient to raise an issue

for judicial review, and issues not raised in the Plaintiffs' opening brief are deemed abandoned or waived. See Tran v. Trustees of the States Colleges, 355 F.3d 1263, 1266 (10th Cir. 2004); Corson and Gruman Co. v. NLRB, 899 F.2d 47, 50 n.4 (D.C. Cir. 1990). Further, the Olenhouse framework generally does not allow the reviewing court to "rely on evidence outside the administrative record" or "the *post hoc* rationalizations of counsel," nor can it "attempt[] itself to supply a reasoned basis for agency action without regard to the contents of the administrative record." Olenhouse, 42 F.3d at 1579-80; cf. Perry v. Woodward, 199 F.3d 1126, 1141 n.13 (10th Cir. 1999) ("This Court . . . will not craft a party's argument for him.").

The Federal Defendants' "designation of the Administrative Record, like any established administrative procedure, is entitled to a presumption of administrative regularity. The court assumes the agency properly designated the Administrative Record absent clear evidence to the contrary." Bar MK Ranches v. Yeutter, 994 F.2d 735, 740 (10th Cir. 1993) (citation omitted). "The circumstances which warrant consideration of extra-record materials are 'extremely limited.'" Custer County Action Ass'n v. Garvey, 256 F.3d 1024, 1028 n.1 (10th Cir. 2001) (quoting Am. Mining Cong. v. Thomas, 772 F.2d 617, 626 (10th Cir. 1985)). To justify review of materials outside the Administrative Record designated by the Federal Defendants, Plaintiffs must make "a strong showing of bad faith or improper behavior," or otherwise demonstrate that the Administrative "is so bare that it prevents effective judicial review." Commercial Drapery Contractors, Inc. v. United States, 133 F.3d 1, 7 (D.C. Cir. 1998) (citations and internal quotation marks omitted); see Am. Mining Cong., 772 F.2d at

626 (listing the limited circumstances in which supplementation of the record may be necessary for effective judicial review).

In this case, the Administrative Record designated by the Federal Defendants is extremely voluminous. On October 26, 2000, the Federal Defendants filed indices to the Administrative Record with the Court and represented that they were making the entire Administrative Record available to the parties at their offices in Carlsbad, New Mexico. [Doc. No. 117.] On November 29, 2000, the Court entered a *Stipulated Order Setting Page Limits* [Doc. No. 128] that granted the parties' stipulated motion to use a joint appendix containing relevant portions of the Administrative Record in accordance with the provision in Section 706 of the APA that allows for judicial review of "those parts of [the record] cited by a party." 5 U.S.C. § 706. Such a joint appendix never materialized. Instead, the parties each submitted their own appendices and exhibits with their briefs concerning Plaintiffs' NEPA claim. [Doc. No. 152, 160, 161, 162, 163, 164, 172, 173, 174.] In addition, the Federal Defendants provided an electronic version of the SEIS-II on a CD-ROM at the pretrial conference on December 4, 2000. [Doc. No. 127.]

Some of the materials submitted by Plaintiffs are not contained in the Administrative Record or do not contain a citation to the Administrative Record. I have considered these extra-record materials to determine if they fall within any of the recognized exceptions to the general rule limiting judicial review to the Administrative Record designated by the Federal Defendants. The fact that this Court has examined these materials for this limited purpose does not necessarily mean that they are considered part of the Administrative Record or that

the Federal Defendants erred in omitting them from the Administrative Record. See Am. Mining Cong., 772 F.2d at 626.

C. Merits of Plaintiffs' NEPA Claim

The issues which form the basis for Plaintiffs' claim that the SEIS-II is inadequate fall into the following general categories: (1) reliance on false or concealed information; (2) analysis of hydrology, geology, and possible release scenarios; (3) feasibility of alternative disposal sites; (4) risk of transporting TRU waste; (5) environmental justice impacts; (6) characterization of waste; and (7) other safety issues. I will first address the category of issues which relate to Plaintiffs' assertion that the Federal Defendants acted in bad faith by relying on false information or concealing accurate information from the public.

1. Reliance on False or Concealed Information

In their opening brief, Plaintiffs assert that the Court should consider matters outside the Administrative Record in determining whether the Federal Defendants have met their obligations under NEPA in this case. [Doc. No. 172, at 58-61.] The Federal Defendants oppose this request. [Doc. No. 151, at 17-23.]

To support their assertions, Plaintiffs refer to affidavits or deposition testimony from four individuals who claim that the Federal Defendants' environmental analysis of the WIPP site is based on flawed interpretations of geologic and hydrologic data which resulted from bad-faith efforts to falsify, conceal, or suppress information relevant to such interpretation. The materials referenced by Plaintiffs can be summarized as follows.

First, Plaintiffs present an affidavit of Richard Hayes Phillips, a geologic consultant,

claiming that the Federal Defendants' analysis of the WIPP site relies on a calculation of the transmissivity² of the Magenta Dolomite³ member of the Rustler Formation⁴ that was falsified or altered back in the early 1980s.⁵ According to Dr. Phillips' affidavit, the effect of relying on this miscalculation is that the Federal Defendants "completely ignore the most transmissive aquifer in the immediate vicinity of the WIPP waste panels." [Doc. No. 172, Ex. 6.]

Second, Plaintiffs present answers to written deposition questions by Dr. Lawrence Barrows, a geophysicist, opining that the WIPP site has karst⁶ features and claiming that certain information relevant to this opinion was concealed from the public. In particular, Dr. Barrows admits that on one occasion he overheard a geophysicist who worked for Bechtel object to the erasure of certain faults from a map of geological features at the WIPP site, and on another occasion his supervisor told him that his interpretation of a gravity survey would not be sent to the Southwest Research and Information Center (SRIC) in response to a

²The SEIS-II defines "transmissivity" as: "[a] quantity defined in the study of groundwater hydraulics that describes the rate at which water may be transmitted through an aquifer. It has units of length²/time." [SEIS-II at GL-17.]

³The SEIS-II defines "Magenta Dolomite" as: "[t]he upper of the two dolomite layers within the Rustler Formation that are locally water-bearing." [SEIS-II at GL-11.]

⁴The SEIS-II defines "Rustler Formation" as: "[t]he evaporite beds, including mudstones, of Permian age that immediately overlie the Salado Formation in which the Waste Isolation Pilot Plant disposal levels are built." [SEIS-II at GL-15.]

⁵The transmissivity of the Magenta Dolomite is discussed in the SEIS-II at 4-27.

⁶The SEIS-II defines "karst" as: "[a] topography characterized by sinkholes, caves, and disappearing streams formed by dissolution in limestone, dolomite, and evaporite bedrock." [SEIS-II at GL-10.]

request under the Freedom of Information Act (FOIA). [Doc. No. 172, Ex. 7.]

Third, Plaintiffs submit a number of unsworn materials from Roger Y. Anderson, a professor of geology, collected under the title of “Plaintiffs’ Expert Witness Report.” These materials contain conclusory allegations to the effect that the scientific analysis of the WIPP site by the Federal Defendants or their contractors was unduly influenced by political pressure to achieve a predetermined result. To support these allegations, Dr. Anderson claims that the Federal Defendants made efforts to deny the existence of dissolution⁷ at the WIPP site and to downplay the risk that the waste deposited at WIPP could be flooded as a result of fluid injections associated with petroleum prospecting activities. [Doc. No. 172, Ex. 5.]

Finally, Plaintiffs present the affidavit of Janet Greenwald, a coordinator for Plaintiff CARD. Ms. Greenwald claims to have gathered information demonstrating that the Federal Defendants relied on false or erroneous information and attempted to conceal this reliance from her organization and others. In particular, she cites the reports prepared by Professor Anderson and Dr. Barrows (the two scientists noted above), and her contacts with two other scientists, Dr. David T. Snow and Mr. Robert Kehrman. According to Ms. Greenwald’s affidavit, she attended a meeting in 1993 at which Dr. Snow told her that the Federal Defendants were not testing for karst at the WIPP site and were ignoring evidence of karst.

⁷The SEIS-II defines “dissolution” as: “[t]he process whereby a material is taken into solution. Selective dissolution of minerals may produce cavities and caves, or enlarged fractures in a rock formation.” [SEIS-II at GL-5.]

Ms. Greenwald also points out certain alleged discrepancies in the Federal Defendants' investigations regarding the presence of karst at the WIPP site that were the subject of her cross-examination of Mr. Kehrman during a public hearing on February 23, 1999. [Doc. No. 172, Ex. 4.]

The materials presented by Plaintiffs in these affidavits and deposition testimony shows that there is a dispute among members of the scientific community concerning the interpretation of hydrologic and geologic data regarding the WIPP site. The presence of such a dispute, however, does not mean that the Federal Defendants' conduct in preparing their NEPA analysis reached the level of bad faith or impropriety that is necessary to justify going outside the Administrative Record in this context. See Commercial Drapery Contractors, Inc., 133 F.3d at 7; Am. Mining Cong., 772 F.2d at 626.

In particular, Plaintiffs have not made a strong showing that the information which concerns them was deliberately falsified, concealed, or suppressed at the time of the public comment period which preceded the issuance of the SEIS-II, such that they could not participate meaningfully in the NEPA process at that time. In this regard, the Court notes that, according to Dr. Phillips' affidavit, the raw data from which he derives his transmissivity calculations for the Magenta Dolomite was contained in an "old Sandia National Laboratories publication called the 'Geologic Characterization Report' or GCR (Powers *et al.*, 1978, SAND 78-1596, 2 vols.)." [Doc. No. 172, at Ex. 6.] The fact that Dr. Phillips waited until December 1998 to review that publication and send the raw data to Dr. Snow for a new transmissivity calculation does not mean that the information was concealed

from the public in bad faith prior to that date. Nor is such an allegation of bad faith supported by the fact that Dr. Phillips later discovered some drafts of the 1983 Mercer report that contain handwritten editing on the transmissivity calculations for the Magenta Dolomite. The appearance of such editing on a draft document is not unusual in the normal course of proofreading and peer review. The difference between the calculations produced in the final report and the calculations later produced by Dr. Snow simply shows the presence of conflicting scientific opinions on this issue.

The Court reaches a similar conclusion about Plaintiffs' allegations that information pertaining to the presence of karst (or other flowpaths for intrusion) at the WIPP site was concealed from them. Ms. Greenwald admits in her affidavit that she received information about this issue from Dr. Snow in 1993, and that the reports by Dr. Anderson and Dr. Barrow were respectively issued in 1980 and 1983. [Doc. No. 172, at Ex. 4.] These dates are well in advance of the public comment period that preceded the issuance of the SEIS-II. Ms. Greenwald's affidavit contains no allegation that the statement of the Nuclear Regulatory Commission in 1998 was concealed in bad faith from Plaintiffs, nor is an inference of bad faith raised by Ms. Greenwald's description of her cross-examination of Mr. Kehrman in 1999. A difference of opinion between Mr. Kehrman and other scientists as to whether the underlying aquifer at the WIPP site is recharged by surface water does not show that there was an effort by the Federal Defendants to falsify or conceal information in bad faith.

Similarly, the allegation that other scientists disagreed with Dr. Barrow's conclusions about karst, or instructed others not to use that word in their reports, does not support a

reasonable inference of bad faith under these circumstances. Cf. Stewart v. Potts, 126 F. Supp. 2d 428, 434-35 (S.D. Tex. 2000) (concluding that a plaintiff failed to make the required showing of “bad faith” by presenting evidence of a meeting at which the defendants’ consultants were told to remove certain legally operative words from a draft of an environmental impact statement), aff’d, 34 Fed. Appx. 12, 2002 WL 496389 (5th Cir. 2002). Further, Dr. Barrow’s deposition does not establish that information about karst was unavailable to Plaintiffs at the time of the public comment period on the SEIS-II, as he provides no dates with regard to when the gravity survey or the faults on the map were allegedly concealed from, and later revealed to, the Plaintiffs.

Finally, the Court will not alter the standard of review and go outside the Administrative Record based on Dr. Anderson’s allegations that the scientists employed by the Federal Defendants altered their analyses in order to achieve a predetermined result based on political pressures. “Although it is true that agencies are expected to engage in good faith fact-finding, when their findings are challenged as arbitrary and capricious, the agencies’ actions are judged in accordance with their stated reasons.” Spiller v. White, 352 F.3d 235, 242 (5th Cir. 2003). The “actual subjective motivation of agency decisionmakers is immaterial as a matter of law--unless there is a showing of bad faith or improper behavior.” In re: Comptroller of the Currency, 156 F.3d 1279, 1279-80 (D.C.Cir.1998); accord Animal Defense Council v. Hodel, 840 F.2d 1432, 1437 (9th Cir. 1988) (citing Citizens to Preserve Overton Park, Inc., 401 U.S. at 420).

The Court concludes that Plaintiffs have not made such a showing here. See Nat’l

Audubon Soc. v. Hoffman, 132 F.3d 7, 16 (2d Cir. 1997) (affirming a district court's conclusion that a plaintiff failed to make the required "strong showing" of bad faith by tendering the affidavit of a former government employee which alleged that the defendant had predetermined the result of its NEPA analysis); Stewart, 126 F. Supp. 2d at 434-35 (similar). Most, if not all, of the issues or information that Plaintiffs claim were suppressed due to political machinations are openly discussed in the body of the SEIS-II and in the Federal Defendants' responses to public comments. In particular, the issues of karst, dissolution processes, and other possible flowpaths (including the "Hartman scenario" and the "gravity survey") are discussed in the body of the SEIS-II or in the Comment Response Document (CRD) appended thereto, with references provided to sources of additional information in the record. [SEIS-II, §§ 4.1.3.2, 5.1.12.2; CRD §§ 13.07(12), 13.09(03), 13.10(06), 13.11(02), 15.01(12), 16.05(06), 16.06(01), 17.01(07), 17.01(09).] For these reasons, the Court concludes that the Administrative Record and the SEIS-II contain adequate information to respond to Plaintiff's allegations, and further consideration of extra-record materials is not warranted. See Animal Defense Council, 840 F.2d at 1437.

2. Analysis of Hydrology, Geology, and Possible Release Scenarios

Plaintiffs devote the majority of their brief-in-chief to their contention that the SEIS-II is inadequate in its analysis of the geology and hydrology of the WIPP site and the potential for intrusions at the site that could result in a release of radioactive waste into the surface environment. [Doc. No. 172, at 13-46.] In particular, Plaintiffs claim that the SEIS-II inadequately responds to the issues regarding karst that are raised in the doctoral dissertation

of Richard Hayes Phillips, the geologic consultant whose affidavit is discussed above. [Doc. No. 172, at 13-18.] In addition, Plaintiffs point to evidence of several karstic features, or potential flowpaths, that they claim the SEIS-II does not adequately address. These features or flowpaths allegedly include: (1) a solution-subsidence trough⁸ that extends 2000 feet into the southwestern portion of the WIPP site [Doc. No. 172, at 19-20]; (2) perforations or solution pipes⁹ through the Mescalero Caliche¹⁰ caprock at the WIPP site [Doc. No. 172, at 20-21]; (3) a solution-subsidence sinkhole¹¹ identified as “WIPP-14” [Doc. No. 172, at 21-24]; (4) a groundwater flowpath from a shaft at the WIPP repository to the Nash Draw¹² [Doc. No. 172, at 24-26]; (5) rainwater recharge or infiltration of the Rustler Formation [Doc. No. 172, at 26-29]; (6) the transmissivity of the Magenta Dolomite [Doc. No. 172, at 30-33]; (7) seepage or release of brine¹³ caused by roof-fall and the build-up of gas pressure [Doc. No. 172, at 33-34]; (8) intrusion scenarios such as water flooding, injection of brine and other fluid, air drilling, and leakage through drill holes [Doc. No. 172, at 34-44]; (9)

⁸Plaintiffs’ define “solution-subsidence trough” as a “karst valley . . . formed by collapse of surface rocks into underground caverns.” [Doc. No. 172, at xiv.]

⁹Plaintiffs define “solution pipes” as “holes through caliche caprock caused by dissolution.” [Doc. No. 172, at xiii.]

¹⁰The SEIS-II refers to “Mescalero Caliche” as: “A layer enriched in calcium carbonate material [that] is typically present beneath the surface layer of sand.” [SEIS-II, at 4-10.]

¹¹Plaintiffs define “sinkhole” as “a circular depression in a karst landscape that funnels water to underground flow channels.” [Doc. No. 172, at xiii.]

¹²The SEIS-II defines “Nash Draw” as: “A shallow 8-kilometer (5-mile) wide valley open to the southwest located to the west of the Waste Isolation Pilot Plant site.” [SEIS-II, at GL-11.]

¹³Plaintiffs define “brine” as “water with greater than 100 parts per thousand salinity.”

effects of potash mining above the WIPP repository [Doc. No. 172, at 44]; and (10) flowpaths resulting from pressurized brine reservoirs in the Castile Formation,¹⁴ which Plaintiffs claim are incorrectly modeled using the “Monte Carlo method.” [Doc. No. 172, at 44-46].

In presenting their arguments regarding these issues, Plaintiffs repeatedly refer to the EPA as the decisionmaker whose actions they challenge. As noted above, this Court is not the proper forum for judicial review of EPA actions taken pursuant to the LWA because of the language in Section 18 of that statute. See Bowen, 487 U.S. at 903. Accordingly, the Court limits its analysis to whether the Federal Defendants in this case (which do not include the EPA) have violated the “arbitrary and capricious” standard articulated in Section 706 of the APA with respect to the issues regarding their NEPA decisionmaking that are timely raised and briefed by Plaintiffs in this action.

With these limitations in mind, I conclude that the evidence of karstic features and other flowpaths presented by Plaintiffs does not render the Federal Defendants’ NEPA decisionmaking arbitrary and capricious. An agency’s action is “arbitrary and capricious” under Section 706 of the APA if it “entirely fails to consider an important aspect of the problem.” Motor Vehicle Mfrs. Ass’n, 463 U.S. at 43. In the context of NEPA, this means that supplementation of an environmental impact statement is required when there exists new

¹⁴The SEIS-II defines “Castile Formation” as: “A Permian age rock unit of evaporites (interbedded halite and anhydrite) that immediately underlies the Salado Formation, the rock unit in which disposal rooms are excavated.” [SEIS-II, at GL-3.]

information that is “sufficient to show that the remaining action will ‘affect the quality of the human environment’ in a significant manner or to a significant extent not already considered.” Marsh, 490 U.S. at 374; accord Friends of the Bow, 124 F.3d at 1218.

In this case, I conclude that the information presented by Plaintiffs concerning karstic features and other potential flowpaths is not new and is not an aspect of the problem that the Federal Defendants entirely failed to consider. Dr. Phillips dissertation is dated June 1987 (more than ten years prior to the issuance of the SEIS-II) and is part of the Administrative Record. [Doc. No. 162, at 518.] The Federal Defendants specifically responded to the public comments and dissertation of Dr. Phillips in the SEIS-II, repeatedly noting that they are “well aware of the importance of karst features and related dissolution processes in defining the surface features in the region surrounding WIPP.” [CRD §§ 13.11(02), 16.05(06); 17.01(09).] In particular, the Federal Defendants’ responses to public comments in the SEIS-II acknowledge the presence of karst features at shallow depths, including sinkholes, solution-subsidence troughs, infiltration of the Mescalero caliche, recharge of the Rustler Formation, and groundwater flow in the Culebra Dolomite across the WIPP site toward Nash Draw. [CRD § 16.05(06).] The SEIS-II also addresses other scenarios such as potash mining, leakage through drill holes, injection of brine or other fluids (as indicated in the “Hartman scenario”), the presence of pressurized brine in the Castile Formation, and scenarios involving roof-fall and the build-up of gas pressure. [SEIS-II §§ 3.1.3.5, 4.1.3.2, 5.1.12.2; SEIS-II App. H; CRD §§ 13.01(07), 13.01(21), 13.01(39), 13.02(4), 13.02(04), 13.02(19), 13.04(1), 13.06(02), 13.06(05), 13.06(06), 13.06(07), 13.07(01), 13.07(02),

13.07(03), 13.07(04), 13.07(05), 13.07(12), 13.07(15), 13.08(06), 13.08(07), 13.09(01), 13.09(02), 13.10(06), 13.11(04), 13.11(05), 15.01(02), 15.01(12), 16.05(02), 16.05(04), 16.07(01), 17.01(05), 17.01(07).] Further, the SEIS-II used median (50th percentile) and 75th percentile values for modeling parameters, not the “Monte Carlo method” used in the EPA Compliance Certification Application to which Plaintiffs object. [SEIS-II § 5.1.12; CRD § 13.02(18).]

The public comments on the SEIS-II and the Federal Defendants’ responses to them show that there are conflicting opinions in the scientific community regarding the significance of the issues raised therein. The limited judicial review afforded by Section 706 of the APA, however, does not permit the Court to serve as an independent factfinder in resolving such conflicts in the evidence. Rather, the Court is required to defer to the agency’s resolution of conflicting evidence concerning issues within its area of expertise, unless the agency’s choice is unsupported by any substantial evidence in the record, see Friends of the Bow, 124 F.3d at 1218, or “is so implausible that it could not be ascribed to a difference in view or the product of agency expertise,” Motor Vehicle Mfrs. Ass’n, 463 U.S. at 43.

Both the Supreme Court and the Tenth Circuit have clearly stated that: “When specialists express conflicting views, an agency must have discretion to rely on the reasonable opinions of its own qualified experts even if, as an original matter, a court might find contrary views more persuasive.” Marsh, 490 U.S. at 378; accord Friends of the Bow, 124 F.3d at 1218; Holy Cross Wilderness Fund, 960 F.2d at 1523-24. The Court is bound

by these precedents in reviewing the conflicting interpretations of hydrologic and geologic data presented here.

While this Court expresses no opinion as to which of these conflicting interpretations ultimately will be proven accurate, I conclude that the Federal Defendants' interpretation has the minimum level of plausibility and support in the Administrative Record necessary to survive judicial review under the precedents noted above. In particular, the SEIS-II offers a plausible explanation, with some support in the record, as to why the presence of karst features and dissolution processes at the WIPP site does not affect the Federal Defendants' decision to store TRU waste there, namely that these features and processes "are generally found in the higher stratigraphic units and within a few hundred feet of the land surface," but are not "active within the deeper Salado Formation" where the waste in question is to be located. [CRD § 13.11(02), 16.05(06); 17.01(09) (citing SEIS-II § 4.1.3.2 and App. H).] There is also some support in the record for the conclusions in the SEIS-II regarding related issues, such as the transmissivity of the Magenta Dolomite [CRD § 16.05(06) (citing SEIS-II §§ 4.1.3.2)], and the unlikelihood of contaminated groundwater reaching the Nash Draw. [CRD § 13.09(03), 13.09(04) (citing SEIS-II Ch.5 and App. H).] Accordingly, I conclude that Plaintiffs' assertions regarding hydrology, geology, and possible intrusion scenarios at the WIPP site do not provide a basis for setting aside the agency action under review or compelling further supplementation of the SEIS-II at this juncture.

3. Feasibility of Alternative Disposal Sites

Plaintiffs' next contention is that the SEIS-II is flawed because it does not consider

the feasibility of alternative disposal sites, such as building long-term storage facilities at each of the sites where defense-related TRU waste has been generated, or using the “high-level waste repository” proposed in a previous environmental impact statement. [Doc. No. 172, at 11-13.] The Federal Defendants deny this contention and assert that the SEIS-II complies with NEPA by considering a range of reasonable alternatives and briefly explaining why others were rejected. [Doc. No. 151, at 23-25.]

In an environmental impact statement, NEPA requires federal agencies to “[r]igorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.” All Indian Pueblo Council v. United States, 975 F.2d 1437, 1444 (10th Cir. 1992) (quoting 40 C.F.R. § 1502.14(a) (1986)); accord Colo. Env'tl. Coalition v. Dombeck, 185 F.3d 1162, 1174 (10th Cir. 1999). The discussion of alternatives in an environmental impact statement must be “adequate to demonstrate that the decision maker considered the alternatives and gave plausible reasons why they were rejected.” All Indian Pueblo Council, 975 F.2d at 1446.

NEPA permits federal agencies to “reject alternatives that did not meet the purpose and need of the project,” provided that they “do not define the project so narrowly that it foreclosed a reasonable consideration of alternatives.” Davis v. Mineta, 302 F.3d 1104, 1119 (10th Cir. 2002) (citations omitted); accord Colo. Env'tl. Coalition, 185 F.3d at 1174-75. A “reasonable alternative” is one that is “non-speculative” and “bounded by some notion of feasibility.” Utahns v. Better Transp., 305 F.3d at 1172. In this regard, the Supreme Court

has stated that:

There is reason for concluding that NEPA was not meant to require detailed discussion of the environmental effects of “alternatives” put forward in comments when these effects cannot be readily ascertained and the alternatives are deemed only remote and speculative possibilities, in view of basic changes required in statutes and policies of other agencies--making them available, if at all, only after protracted debate and litigation not meaningfully compatible with the time-frame of the needs to which the underlying proposal is addressed.

Vermont Yankee Nuclear Power Corp. v. Natural Res. Def. Council, 435 U.S. 519, 551 (1978) (quoting Natural Res. Def. Council v. Morton, 458 F.2d 827, 837-38 (D.C.Cir.1972)); accord Utahns v. Better Transp., 305 F.3d at 1172. In other words, “NEPA does not require agencies to analyze ‘the environmental consequences of alternatives it has in good faith rejected as too remote, speculative, or ... impractical or ineffective.’” All Indian Pueblo Council, 975 F.2d at 1444 (quoting City of Aurora v. Hunt, 749 F.2d 1457, 1467 (10th Cir.1984)).

In the *Record of Decision* published on January 23, 1998, the Federal Defendants state that their objective is “to safely dispose of the TRU waste that has accumulated at DOE sites and to provide for the disposal of additional TRU waste to be generated over approximately the next 35 years (through approximately 2033) in a manner that protects public health and the environment.” 63 Fed. Reg. at 3,625. The Court concludes that this objective is reasonable and does not “define the project so narrowly that it foreclosed a reasonable consideration of alternatives.” Davis, 302 F.3d at 1119 (10th Cir. 2002) (citations omitted); accord Colo. Env'tl. Coalition, 185 F.3d at 1174-75

The SEIS-II was prepared to help the Federal Defendants decide:

- Whether to open and operate WIPP for the disposal of TRU waste, and, if so,
- Which portions of the TRU waste inventory would be disposed of,
- To what minimum level TRU waste must be treated for disposal, and
- What mode of transportation would be used to transport TRU waste to WIPP.

Id. The SEIS-II examines “four alternatives that involve operating the [WIPP] facility” and “two alternatives that involve dismantling and closing WIPP and continuing storage of TRU waste at the generating sites.” Id.

In the *Record of Decision* published on January 23, 1998, the Federal Defendants reject the latter two alternatives on the grounds that they “would not offer the isolation afforded by deep geologic disposal, would require periodic maintenance of storage facilities and waste repackaging, and could not be implemented without modification of agreements that DOE has reached with several states regarding the offsite disposition of TRU waste.” Id. at 3,626-27. Similar “no action” alternatives were rejected in the two prior environmental impact statements that the Federal Defendants prepared regarding WIPP. See 46 Fed. Reg. at 9,163; 55 Fed. Reg. at 25,961.

The prior environmental impact statement prepared in 1980 also considered an alternative under which TRU waste then stored at the Idaho National Engineering Laboratory (INEL) would be disposed of at the “first available repository for high-level radioactive waste.” 46 Fed. Reg. at 9,163. Under this alternative, “defense TRU waste would remain stored in a retrievable fashion at the INEL until the first high-level waste repository becomes

available.” Id.

In the *Record of Decision* published on January 28, 1981, the Federal Defendants rejected this alternative because it “would delay the removal of the INEL stored TRU waste until 1997 at the earliest.” They instead selected the alternative of developing WIPP because that alternative “could result in an operational facility by 1987 and thus solve the unacceptable long-term environmental problem of storing TRU waste at INEL in the shortest amount of time and avoid the inflationary costs attributable to delay in constructing the facility.” Id.

A variation on the alternative of disposing of TRU waste at a high level waste repository (instead of WIPP) is briefly considered in the SEIS-II issued in September 1997. Under this variation, the TRU waste would be co-processed with high level waste and mixed with molten glass in a procedure known as “vitrification.” The resulting “highly radioactive glass ‘logs’ would have to be stored in interim storage and eventually buried in a geologic repository.” [SEIS-II, at 3-48.] This alternative was rejected because of “technical difficulties of thermal loading in a high-level waste repository, the operational difficulties that a large additional volume of TRU waste would cause, and potential legislative clarification or Nuclear Regulatory Commission certification by rule.” [SEIS-II, at 3-38, 3-50.]

This alternative also was addressed in the Federal Defendants’ responses to public comments regarding the SEIS-II. [CRD §§ 01.01 (01), 01.01(04), 01.04(09), 01.05(01), 11.01(11).] In support of their conclusion that “[f]urther consideration of disposing of TRU

waste at the first high-level waste repository is not warranted,” the Federal Defendants noted that the interim “[s]torage of waste at the generator sites is bounded by the no action alternatives,” which were studied in detail in the SEIS-II and prior environmental impact statements. [CRD § 1.04(09).] In response to public comments, the Federal Defendants revised the discussion of the high-level waste repository alternative in the SEIS-II “to reflect the technical difficulties of thermal loading in the repository due to high-level waste and the operational difficulties due to increased waste volume and delay in TRU waste disposal.” [CRD § 11.01(11).] The Federal Defendants’ responses to public comments further explain that the

SEIS-II is the third NEPA document in a staged review process for the Waste Isolation Pilot Plant (WIPP). Alternatives considered in both the 1980 *Final Environmental Impact Statement for the Waste Isolation Pilot Plant* (FEIS) and the 1990 *Final Supplement Environmental Impact Statement for the Waste Isolation Pilot Plant* (SEIS-I) that were not analyzed in detail included transmutation, subseabed disposal, deep borehole disposal, and geologic repositories other than the WIPP site. The alternatives considered since the FEIS that were not analyzed in detail included co-processing with high-level waste and vitrification, disposal in space, underground detonation, greater confinement (shallow borehole), and alternative engineered barriers. These alternatives were found to be unreasonable or not suitable based on current research. Through these three documents (FEIS, SEIS-I, and SEIS-II), DOE has considered all reasonable alternatives.

[CRD § 01.01(01).]

Considered in the context of the Federal Defendants’ staged NEPA review process as a whole, the Court concludes that the SEIS-II complies with NEPA by providing a brief discussion of the reasons why the high-level waste repository alternative was eliminated from further detailed study (beyond that already provided in the original environmental impact

statement issued in 1980). See All Indian Pueblo Council, 975 F.2d at 1444 (10th Cir. 1992); Colo. Envtl. Coalition, 185 F.3d at 1174. The Court also determines that the technical and operational reasons for rejecting this alternative given in the SEIS-II are plausible and lie within the realm of agency expertise on which Courts are required to defer. See All Indian Pueblo Council, 975 F.2d at 1446 (concluding that an agency's reasons must be plausible); Marsh, 490 U.S. at 378 (concluding that "an agency must have discretion to rely on the reasonable opinions of its own qualified experts even if, as an original matter, a court might find contrary views more persuasive").

4. Risk of Transporting TRU Waste

Plaintiffs claim that the SEIS-II is inadequate because it underestimates the risk of intentional interference with shipments of TRU waste by terrorists or saboteurs. In particular, Plaintiffs allege that the SEIS-II fails to account for the increased risk resulting from a *Certificate of Compliance* issued by the Nuclear Regulatory Commission (NRC), which allows an increase in the plutonium content of each "TRUPACT-II" payload container from 200 fissile-gram equivalents (FGE) to 2,800 FGE. [Doc. No. 172, at 46-47.]

The Federal Defendants assert that this increase in plutonium content was taken into account in the SEIS-II. [Doc. No. 151, at 36-37.] In particular, Appendix A of the SEIS-II notes that the NRC

recently approved the use of pipe overpacks in the TRUPACT-II shipping container This change will allow a pipe overpack in a drum to contain 200 FGE; therefore, if the TRUPACT-II is allowed to carry 14 such drums, the TRUPACT-II limit would be 2,800 FGE. . . . For the purpose of analyses in SEIS-II, it has been assumed that the pipe overpack will be incorporated into

the WAC.

[SEIS-II, App. A, § A.2.1.4.]

The threat of terrorism or sabotage also was specifically addressed in the SEIS-II. [SEIS-II, App. E, at E-42; CRD §§ 07.01(07), 19.11(02)]. In particular, the Federal Defendants added the following language to Appendix E of the SEIS-II in response to public comments on this issue:

The Department considers the probability of sabotage or terrorist activities to be very small because TRU waste contains only small, hard-to-recover amounts of plutonium and other materials used to manufacture nuclear weapons. In addition, any act of terrorism or sabotage in which a TRUPACT-II containing the maximum inventory permitted would be breached in an urban area would be unlikely to cause greater impacts than those presented for the accident scenarios in this appendix.

The mass and integrity of the TRUPACT-II and proposed RH-72B packages makes TRU waste shipments unattractive targets for terrorism. The packaging would withstand all but the most extreme efforts to release contaminants. The 1980 FEIS discusses the difficulty of scattering enough material to create a major health hazard. The analysis concluded that more damage would be done by the explosives used to breach the waste packages than by any radioactive materials released.

Although escorts might reduce the already small threat of terrorism, DOE does not believe such escorts are warranted. All nuclear materials are afforded some level of protection, but the level of security provided to a shipment of TRU waste, which contains small amounts of hard-to-recover plutonium, would be considerably less than the level of protection provided to a shipment of material from which nuclear weapons can be made. In the case of TRU waste shipments, current safeguards include the following: the TRANSCOM satellite tracking system would continuously monitor the position and status of shipments en route to WIPP; each vehicle would be equipped with mobile phone communications; the drivers would be required to maintain visual contact with the shipment at all times, even during rest stops; and the drivers would receive specialized training on how to respond to sabotage and terrorism.

[SEIS-II, App. E, at E-42.]

I note that the SEIS-II, as well as the filing of Plaintiffs' *Final Complaint*, predate the events of September 11, 2001. While those events have had a profound effect on issues of homeland security, the NEPA claim that is the subject of this litigation does not involve any specific new information that has come to light since September 11, 2001, and that would render the SEIS-II inadequate with respect to issues of terrorism or sabotage.

In particular, the issue of raising the limits on plutonium content for the pipe overpacks is not new, as the NRC certification occurred before the SEIS-II was issued and was specifically discussed in the SEIS-II. Further, Plaintiffs' briefs provide no specific references to data, methodology, or assumptions in the SEIS-II's transportation analyses which they believe to be flawed in light of the plutonium-content limits approved by the NRC in 1997. Under these circumstances, Plaintiffs have not shown grounds for requiring further supplementation of the SEIS-II regarding this issue, and the Court is required to defer to the agencies' expertise with respect to the data, assumptions, and methodology used in their transportation analyses. See Marsh, 490 U.S. at 374-78; cf. Fed. R. App. P. 28(a)(9)(A) (requiring an opening brief to contain "citations to the authorities and parts of the record on which the appellant relies").

5. Environmental Justice Impacts

Plaintiffs also challenge the SEIS-II on the grounds that it does not comply with recent mandates concerning the issue of "environmental justice" and fails to adequately consider environmental impacts on low-income and minority populations along the routes designated

for shipping TRU waste to the WIPP site. [Doc. No. 172, at 47-51.] In response to this challenge, the Federal Defendants assert that the SEIS-II adequately considered the issue of environmental justice [SEIS-II, §§ 4.1.6.3, 5.8; CRD § 6.0] and complied with the requirements of NEPA [Doc. No. 151, at 37-39].

The analysis of this issue is limited to the NEPA claim asserted in Plaintiff's *Final Complaint*. [Doc. No. 168.] I do not review the Federal Defendants' compliance with the *Executive Order* cited by Plaintiffs because that order does not "create any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity by a party against the United States, its agencies, its officers, or any person." Exec. Order No. 12,898, § 6-609, 59 Fed. Reg. 7,629, 7,632-33 (Feb. 11, 1994). See Morongo Band of Mission Indians v. FAA, 161 F.3d 569, 575 (9th Cir. 1998). Further, Plaintiff's *Final Complaint* does not assert a cause of action under any federal statute other than NEPA, and therefore Plaintiffs' citation to authorities recognizing a theory of disparate-impact discrimination under Title VI of the Civil Rights Act is inapposite. I express no opinion about whether WIPP is in compliance with the substantive prohibitions on invidious discrimination contained in any civil-rights statutes or executive orders.

Nevertheless, the issue of environmental justice is properly before the Court to the limited extent that it arises under NEPA's procedural requirements for informed decisionmaking. See Communities Against Runway Expansion v. FAA, 355 F.3d 678, 689 (D.C. Cir. 2001). Because the Federal Defendants exercised their discretion to include an environmental justice analysis in the SEIS-II, "that analysis therefore is properly subject to

‘arbitrary and capricious’ review under the APA.” Id.

The focus of the environmental-justice analysis in the SEIS-II is on the demographics of the areas within fifty miles of the WIPP site and other sites where TRU waste may be treated before shipment to the WIPP site, such as Los Alamos National Laboratory (LANL) and the Sandia National Laboratory (SNL). The SEIS-II states that “potentially high and adverse human health effects could occur during normal, accident-free treatment operations at some treatment sites as a result of TRU waste management activities under the three Action Alternative 2 subalternatives,” and that, under Action Alternative 2C, such adverse human health effects could “disproportionately affect the minority populations in the vicinity of WIPP.” [SEIS-II, § 5.8, at 5-179 to 5-180.] The SEIS-II also states that such disproportionate impacts are unlikely with respect to “treatment accidents” because such accidents “would not be expected to impact off-site populations” and would depend on “meteorological conditions at the time of the accident.” [SEIS-II, § 5.8, at 180.] “Disposal accidents” at the WIPP site would not be expected to disproportionately impact minority or low-income populations, although such disproportionate impacts are “possible.” [SEIS-II, § 5.8, at 5-180 to 5-181.]

The SEIS-II also identifies transportation routes for shipping TRU waste to the WIPP site. These routes span thousands of miles and extend from the Hanford site in the State of Washington to the Savannah River site in South Carolina. [SEIS-II, App. E, at Fig. E-1.] These transportation routes also span the entire length of the State of New Mexico, from Interstate 25 at the northern border with Colorado to Highway 285 at the southern border

with Texas. [SEIS-II, App. E, at Fig. E-2.]

With respect to potential adverse effects on areas adjoining the transportation routes leading to the WIPP site, the SEIS-II concludes that “[w]hether the affected people would be minorities or low-income individuals cannot be predicted.” [SEIS-II, § 5.8, at 180.] To support this conclusion, the SEIS-II reasons that “[t]he ethnic and income distribution of travelers and workers at rest stops, where the impacts would primarily occur, would vary over time and by location,” and that “[a]ccidents would be random events that could occur on any segment of the transportation routes.” [SEIS-II, § 5.8, at 180.]

I conclude that the Federal Defendants’ analysis of the issue of environmental justice complies with the requirements of NEPA and survives judicial scrutiny under the “arbitrary and capricious” standard set forth in Section 706 of the APA. While Plaintiffs offer their own hypotheses that interstate highways are more likely to go through minority and low-income neighborhoods and that drivers on the designated transportation routes would probably be representative of nearby communities, these hypotheses are unsupported by any citation to the Administrative Record or other evidence. And while Plaintiffs request more “studies” on these topics, they do not offer a specific methodology that would account for all the variables noted in the SEIS-II’s analysis concerning the transportation routes. Under these circumstances, the Federal Defendants’ “choice among reasonable analytical methodologies is entitled to deference.” Communities Against Runway Expansion, Inc., 355 F.3d at 689; see Marsh, 490 U.S. at 378.

6. Waste Characterization

Plaintiffs' next objection to the SEIS-II concerns a process known as "waste characterization." Plaintiffs contend that analysis of waste characterization in the SEIS-II relies on the *Compliance Certification Application* (CCA) that the Federal Defendants submitted to the EPA Administrator pursuant to Section 8 of the LWA, and which the EPA Administrator was reviewing at the time the SEIS-II was issued. [See SEIS-II, at I-9 to I-10.] Plaintiffs further contend that the EPA certification process is flawed because it allows for a piecemeal approach to the certification and characterization of various "waste streams" that is based on uncertain estimates rather than actual characterization data describing the complete waste inventory planned for disposal at WIPP. According to Plaintiffs, the SEIS-II cannot reasonably purport to analyze the environmental impacts of the WIPP disposal system without more detailed information about the extent and characteristics of the waste that the Federal Defendants plan to bring to the site. [Doc. No. 172, at 51-56.]

To properly analyze Plaintiffs' assertions regarding the issue of waste characterization, it is necessary to place them in the context of the Federal Defendants' overall scheme for identifying and categorizing different types of radioactive waste. The SEIS-II identifies and categorizes the waste that potentially may be sent to the WIPP for treatment and/or disposal as follows.

First, the SEIS-II makes a distinction between TRU waste and other types of radioactive waste, such as high-level waste, low-level waste, low-level mixed waste, and hazardous waste. One of the basic premises of the SEIS-II is that these other types of

radioactive waste “would not be disposed of at WIPP, and management of these wastes is unrelated to, and outside the scope and purpose of, [the] SEIS-II.” [SEIS-II, § 1.5, at 1-12.] This basic premise is not challenged by Plaintiffs in this litigation.¹⁵

The SEIS-II also distinguishes among different types (or “inventories”) of TRU waste. In particular, the SEIS-II makes a distinction between “(1) defense waste of the type that was subject to previous WIPP-related National Environmental Policy Act (NEPA) reviews and (2) other defense and nondefense waste for which DOE retains management responsibility.” [SEIS-II, § 2.1.] Again, this basic distinction is not at issue in this litigation.¹⁶

The two previous WIPP-related environmental impact statements issued by the Federal Defendants “examined the impacts of transporting and disposing of waste that resulted from defense activities and that was placed in retrievable storage pursuant to a 1970 Atomic Energy Commission policy . . . and TRU waste that was reasonably expected to be generated by these ongoing activities and programs.” [SEIS-II, § 2.1.] The SEIS-II refers

¹⁵In particular, the Court notes that this action does not involve the legality of the Federal Defendants’ *Order 435.1*, which governs reclassification of certain high-level radioactive waste into other categories of waste. That order was issued in 1999 (after completion of the SEIS-II) and was later declared invalid, as it relates to “incidental waste,” in Natural Resources Def. Council v. Abraham, 271 F. Supp. 2d 1260 (D. Idaho 2003).

¹⁶Plaintiffs’ *Final Complaint* contains one subparagraph alleging flaws in the Federal Defendants’ analysis of “non-defense waste” in the SEIS-II. [Doc. No. 168, § 32(e), at 9.] With the exception of the general contention that the SEIS-II fails to accurately characterize non-defense waste, the allegations in this subparagraph of the *Final Complaint* are not pursued in Plaintiffs’ opening brief regarding their NEPA claim. Consequently, these allegations regarding “non-defense waste” are deemed waived or abandoned with respect to this litigation, except insofar as they relate to Plaintiffs’ argument regarding the characterization of TRU waste in general. See Tran, 355 F.3d at 1266 (stating that issues not raised in an opening brief are deemed abandoned or waived); Corson and Gruman Co., 899 F.2d at 50 n.4 (same).

to this type of defense-related TRU waste as the “Basic Inventory.”

The SEIS-II also identifies a type of TRU waste called the “Additional Inventory.” The Additional Inventory consists of “[o]ther defense and nondefense TRU waste not previously included in the waste inventory by the FEIS or SEIS-I,” including: “(1) nondefense and commercial TRU waste (comprising 0.2 percent of the total TRU waste volume), (2) defense TRU waste commingled with PCBs, (3) and defense (and perhaps some nondefense) TRU waste disposed of prior to the Atomic Energy Commission policy of 1970.” [SEIS-II, § 2.1.] The *Record of Decision* resulting from the SEIS-II selected a “preferred alternative” that does not involve the disposal of the “Additional Inventory” at WIPP. See 63 Fed. Reg. at 3,626.

Augmenting the distinction between the “Basic Inventory” and the “Additional Inventory,” the SEIS-II provides another set of distinctions or categories based on the physical and chemical properties of the TRU waste identified in these inventories. In particular, the SEIS-II distinguishes between contact-handled TRU waste (CH-TRU) and remote-handled TRU waste (RH-TRU) “based on the external [radiation] dose rates at the surface of the container.” [SEIS-II, § 2.1.2] CH-TRU waste and RH-TRU waste are further categorized into eleven “waste matrix code groups.” [SEIS-II, § 2.1.2.]

Depending on its waste matrix code, TRU waste can be further categorized and defined using a process known as “waste characterization,” which may include some or all of the following:

A Nondestructive, nonintrusive assay to identify and quantify the radionuclides in the TRU waste

A Radiographic analyses to determine the physical form of TRU waste in closed containers

A Container headspace gas analysis to detect the presence of hydrogen, methane, or EPA-listed volatile organic compounds

A Solids analyses for the presence of heavy metals such as lead, cadmium, or beryllium

A Visual inspection of an appropriate number of containers to verify quality control[.]

[SEIS-II, § 2.2.1.]

In preparing the SEIS-II, however, the Federal Defendants did not complete this process of “waste characterization” with respect to each item of waste that they contemplate bringing to the WIPP site for disposal. Rather, the analyses in the SEIS-II rely on the waste volumes and other information listed in the *Transuranic Waste Baseline Inventory Report, Revision 3* (BIR-3), which incorporates data from a previous revision (BIR-2). [SEIS-II, §§ 1.2, 1.5, 2.1.3, 3.1, and App. A.] The SEIS-II also contains a comparative analysis of more recent estimates of the total volume of CH-TRU waste and RH-TRU waste. [SEIS-II, § 5.13 and App. J.]

The Federal Defendants contend that Plaintiffs’ objections regarding the issue of waste characterization, or the piecemeal review of different categories of TRU waste, is not properly before this Court because those objections are directed to the EPA’s certification process and not the Federal Defendants’ decisionmaking with respect to the SEIS-II. They

further contend that it would have been premature to complete the waste-characterization process outlined above before issuing the SEIS-II because the waste-characterization process is considered an integral part of the packaging and treatment of the waste destined for WIPP, and the packaging and treatment of such waste is part of the proposed action that the Federal Defendants were required to study in the SEIS-II. [Doc. No. 151, at 40-41.] Thus, according to the Federal Defendants, Plaintiffs argument leads to an absurd result in which they would have to implement part of the proposed action in order to complete their environmental analysis under NEPA, while at the same time refraining from such implementation until that environmental analysis is completed.

I agree that Plaintiffs' arguments with respect to waste-characterization are incoherent and do not provide grounds for setting aside the SEIS-II or compelling further supplementation of that document. In presenting their arguments regarding this issue, Plaintiffs repeatedly refer to the EPA as the decisionmaker whose actions they challenge. As noted above, this Court is not the proper forum for judicial review of EPA actions taken pursuant to the LWA because of the language in Section 18 of that statute. See Bowen, 487 U.S. at 903. Accordingly, I limit the analysis of this issue to the Federal Defendants' decisionmaking pursuant to NEPA, as reflected in the SEIS-II and the Administrative Record.

I conclude that the Federal Defendants' reliance on the relatively detailed inventory listed in the BIR-3, summarized in Appendix A of the SEIS-II, and accompanied by the updated data in Section 5.13 and Appendix J of the SEIS-II, is sufficient to satisfy the requirements of NEPA in this instance. While federal agencies must use the "best available

scientific information” when studying environmental impacts pursuant to NEPA, see Lee, 354 F.3d at 1244 (quoting Custer County Action Ass’n, 256 F.3d at 1034), “an agency need not supplement an EIS every time new information comes to light after the EIS is finalized. To require otherwise would render agency decisionmaking intractable, always awaiting updated information only to find the new information outdated by the time a decision is made.” Marsh, 490 U.S. at 373; accord Friends of the Bow, 124 F.3d at 1218.

To impose a requirement that the Federal Defendants suspend operations at WIPP until the SEIS-II can be further supplemented with actual waste characterization data for each item of waste in their inventories would render agency decisionmaking intractable in this instance and lead to an absurd result in which the agency must implement a portion of its proposed action in order to complete the environmental analysis which, as a matter of law, must precede such implementation.

In reaching this conclusion, I do not imply that the door is now open for the Federal Defendants or other parties or interests to change the definition of “TRU waste” or use WIPP for the treatment or disposal of other types of waste not contemplated in the SEIS-II or not permitted by applicable statutes and regulations. Rather, let it be clearly understood that my ruling very specifically establishes that the Federal Defendants did not act arbitrarily and capriciously, in violation of NEPA, by using the BIR-3 (as supplemented by the more recent data in Appendix J) for their analyses in the SEIS-II, rather than awaiting collection of actual waste-characterization data for each item of TRU waste identified for potential disposal at the WIPP site.

7. Other Safety Issues

The final set of issues that Plaintiffs raise in their challenge to the SEIS-II concerns the safety of the personnel who work at the WIPP site. In particular, Plaintiffs assert that the Federal Defendants failed to adequately consider the potential for roof fall and gas generation within the repository, as well as alleged problems in monitoring volatile organic compounds (VOCs) as a result of moisture from a water leak in the exhaust shaft leading from the repository to the surface above.

As indicated in the previous discussion of the geology and hydrology of the WIPP site and possible intrusion scenarios, the issues of roof fall and gas generation in the WIPP repository were adequately considered in the SEIS-II. In their responses to public comments, the Federal Defendants recognize “the potential for roof fall in the repository” [CRD § 15.01(02)] as well as the “process of gas generation within the repository” [CRD 13.04(01)]. Plaintiffs’ contentions regarding these issues simply point to the presence of a dispute among members of the scientific community, and this Court is required to defer to the Federal Defendants’ resolution of this dispute because it is plausible and finds some support in the Administrative Record. See Marsh, 490 U.S. at 378; Friends of the Bow, 124 F.3d at 1218.

With respect to monitoring for VOCs, the discussion of air-quality concerns in Section 4.1.2 of the SEIS-II mentions the presence of VOC sampling stations in or near the exhaust shaft, and Appendix H of the SEIS-II studies the possibility of VOCs migrating up the shaft seal system. [SEIS II, § 4.1.2 and App. H, at H-10, H-31 to H-32.] The excerpts from the October 1999 report cited by Plaintiffs [Doc. No. 172, at Ex. 2] contain no

reference to VOCs or any impairment in VOC monitoring caused by moisture or water leakage in the exhaust shaft. Thus, I cannot reasonably infer from this report that the VOC monitoring program outlined in the SEIS-II is not functioning as anticipated.

Plaintiffs have not demonstrated that there exists new information concerning this issue which is sufficient to show that the remaining action will affect the quality of the human environment “in a significant manner or to a significant extent not already considered.” Marsh, 490 U.S. at 374. No other issues raised in Plaintiffs’ *Final Complaint* [Doc. No. 168] and in their briefs regarding their NEPA claim [Doc. No. 125, 159, 172, 173, 210] warrant further discussion in this *Memorandum Opinion and Order*.

D. Request for Injunctive Relief

If an agency action falls short of the standards set forth in Section 706 of the APA, Congress has imposed a mandatory duty on the reviewing court to order the applicable remedy provided therein, including injunctive relief to compel agency action unlawfully withheld or unreasonably delayed. See Forest Guardians v. Babbitt, 174 F.3d 1178, 1187 (10th Cir. 1999). No such mandatory duty applies in this case because I have determined that the agency action under review does not fall short of the “arbitrary and capricious” standard set forth in Section 706 of the APA and made applicable to NEPA claims in Marsh, 490 U.S. at 376.

In some cases, permanent injunctive relief also may be considered under traditional equitable principles, which require a showing of (1) actual success on the merits; (2) irreparable harm unless the injunction is issued; (3) a threatened injury which outweighs the

harm that the injunction may cause the opposing party; and (4) no adverse effect on the public interest if the injunction is issued. See Fisher v. Okla. Health Care Auth., 335 F.3d 1175, 1180 (10th Cir. 2003). In this case, however, Plaintiffs have not succeeded in the merits of their NEPA claim against the Federal Defendants, nor have they provided any authority for granting permanent injunctive relief against the Federal Defendants in the absence of success on the merits of this claim. Therefore, Plaintiffs' request for permanent injunctive relief against the Federal Defendants is denied.

III. CONCLUSION

For the foregoing reasons, I deny the relief requested in Plaintiffs' *Motion and Brief in Support of Judgement for Plaintiffs on NEPA Claims in the Second Amended Complaint* [Doc. No. 125, as amended by Doc No. 172], and grant the relief requested in the *Federal Defendants' Motion to Dismiss Due to Plaintiffs' Failure to Demonstrate the Requirements for Injunctive Relief* [Doc. No. 196]. In accordance with these rulings, I dismiss the Federal Defendants from this action and affirm the *Record of Decision for the Department of Energy's Waste Isolation Pilot Plant*, 63 Fed. Reg. 3,624 (Jan. 23, 1998), documenting the Federal Defendants' decision to implement the Preferred Alternative, as analyzed in the "Waste Isolation Pilot Plant Disposal Phase Final Supplemental Environmental Impact Statement" (SEIS-II) dated September 1997. The Preferred Alternative is to use WIPP for the disposal of up to 175,600 cubic meters (6.2 million cubic feet) of the "basic inventory" of TRU waste generated by defense activities that has been placed in retrievable storage since 1970, and defense TRU waste that would continue to be generated over an additional

35-year period.

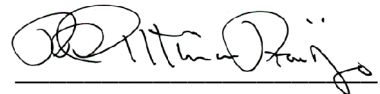
The Court's affirmance of this *Record of Decision* and the SEIS-II is based solely on the conclusion that the Federal Defendants' complied with the procedure required by the National Environmental Policy Act (NEPA) with respect to the issues timely raised and briefed by Plaintiffs in this action. This *Memorandum Opinion and Order* is limited to the *Record of Decision* and SEIS-II noted above and does not purport to review any other actions by the Federal Defendants, or any other federal agencies, relating to WIPP or to the disposal of any type or quantity of radioactive waste other than the basic inventory of TRU waste identified above. Further, because judicial review of Plaintiffs' NEPA claim is limited by the "arbitrary and capricious" standard set forth in Section 706 of the Administrative Procedure Act (APA), this *Memorandum Opinion and Order* does not constitute an independent factual determination by the Court that WIPP is the best alternative for the disposal of any type or quantity of radioactive waste.

IT IS, THEREFORE, ORDERED that Plaintiffs' *Motion and Brief in Support of Judgement for Plaintiffs on NEPA Claims in the Second Amended Complaint* [Doc. No. 125, as amended by Doc No. 172] is **DENIED**, and the *Record of Decision for the Department of Energy's Waste Isolation Pilot Plant*, 63 Fed. Reg. 3,624 (Jan. 23, 1998), documenting the Federal Defendants' decision to implement the Preferred Alternative, as analyzed in the "Waste Isolation Pilot Plant Disposal Phase Final Supplemental Environmental Impact Statement" (SEIS-II) dated September 1997, is **AFFIRMED** with respect to the issues timely

raised and briefed by Plaintiffs in this action.

IT IS FURTHER ORDERED that the *Federal Defendants' Motion to Dismiss Due to Plaintiffs' Failure to Demonstrate the Requirements for Injunctive Relief* [Doc. No. 196] is **GRANTED**, and Plaintiffs' NEPA claim against the Federal Defendants is **DISMISSED WITH PREJUDICE**.

SO ORDERED this 30th day of June, 2004, in Albuquerque, New Mexico.

A handwritten signature in black ink, appearing to read "M. Christina Armijo", is written over a horizontal line.

M. CHRISTINA ARMIJO
United States District Judge